Part Number: PTR07-30090

Kit Contents

Item #	Quantity Reqd.	Description
1	2	Front Springs
2	2	Rear Springs
3	1	Hardware Bag

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	2	Front Damper Locking Nuts
2		
3		

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1		

Conflicts

AVS-equipped models

General Applicability

GS 350 RWD

Recommended Sequence of Application

Item #	Accessory
1	F-Sport Springs should be installed at the same time as F-Sport shock asbsorbers
2	F-Sport Springs should be installed before F-Sport exhaust
2	F-Sport Springs should be installed before F-Sport rear brakes

*Mandatory

Recommended Tools

Personal & Vehicle Protection	**Notes**
Fender Covers	
Safety Glasses	
Special Tools	**Notes**
Spring Compressor	
Floor Jack	Use a block of wood
Installation Tools	**Notes**
Torque Wrench	3/8” & ½” drive
Ratchet	3/8” & ½” drive
Wrenches	14, 19, 24mm
Sockets	10, 14, 17, 19mm
Hexagon Socket	6 mm
Screwdriver	Small flat-head
Nylon Pry Tool	
Special Chemicals	**Notes**

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Reqd.	Description
1	As needed	90467-12069 White trunk trim clip
2	As needed	90467-10167 Blue trunk trim clip
3	As needed	90467-08186-C0 Black trunk trim clip
4	2	90177-12002-C0 Locking nut (front shock absorber assy)

Legend

STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.

OPERATOR SAFETY: Use caution to avoid risk of injury.

CAUTION: A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.

TOOLS & EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.

REVISION MARK: This mark highlights a change in installation with respect to previous issue.

SAFETY TORQUE: This mark indicates that torque is related to safety.

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as:-

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

Please see your Lexus dealer for a copy of this document.

1. Remove the Rear Shock/Spring Assemblies.

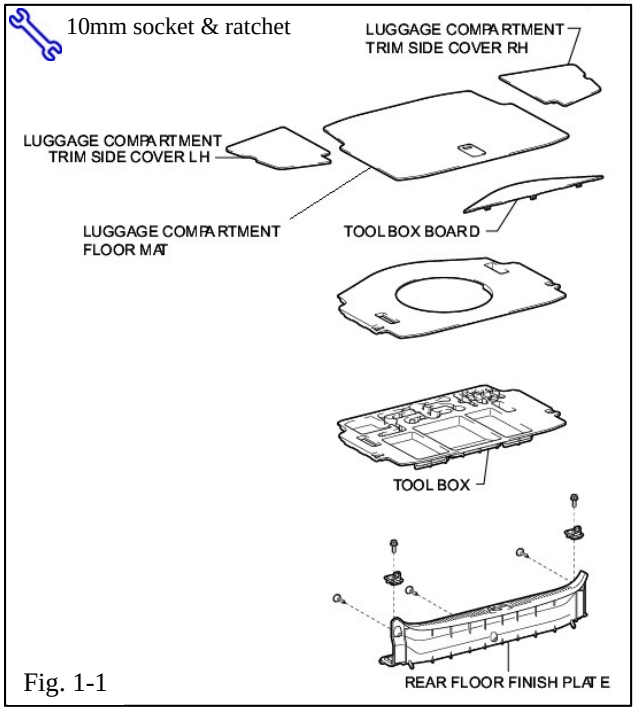

Fig. 1-1

(a) Remove the luggage compartment floor mat (Fig. 1-1).

(b) Remove the luggage compartment trim side cover LH and RH (Fig. 1-1).

(c) Remove the tool box board and tool box (Fig. 1-1).

(d) Remove rear floor finish plate (Fig. 1-1).

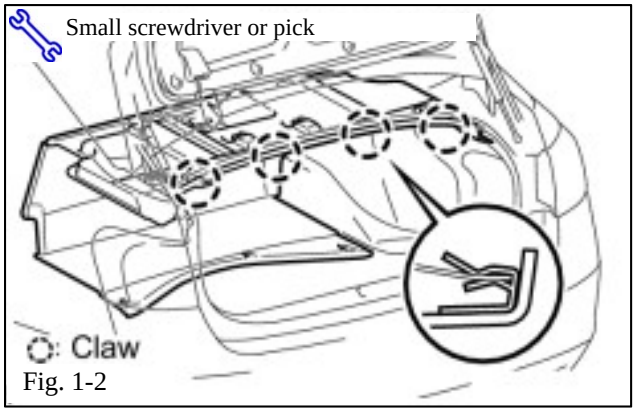

Fig. 1-2

(e) Remove the front luggage compartment trim cover (Fig. 1-2).

(1) Remove the 3 clips from the floor.

(2) Slide out the 2 upper clips and remove the 2 rope hooks.

(3) Disengage the upper clips holding the trim to the package tray.

(4) Unplug the trunk light wire harness.

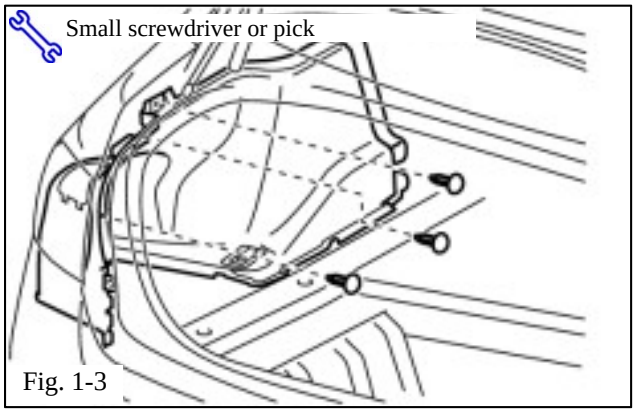

Fig. 1-3

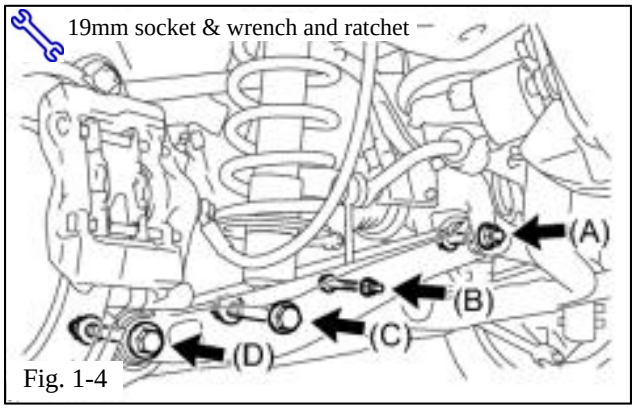

Fig. 1-4

(f) Remove the luggage compartment trim cover inner LH (Fig. 1-3).

HINT: A small screwdriver can be used to unlock clips under the rear trim cover. Do not force the clip!

(g) Remove the luggage compartment trim cover inner RH.

(h) Raise the vehicle and remove the rear wheels.

CAUTION: Do not use an impact wrench on wheel locks (if equipped).

(i) Loosen (do not remove) the lower rear No. 2 suspension arm nut (A, Fig. 1-4).

CAUTION: Do not remove the nut.

(j) Remove bolt B and the nut (Fig. 1-4).

(k) Disconnect the stabilizer link assembly and height control sensor link bracket from the rear No. 2 suspension arm assembly (Fig. 1-4).

(l) Remove bolt C and the nut (Fig. 1-4).

CAUTION: The nut has a locking feature. Remove the bolt and nut by turning the **BOLT** while the nut is held in place.

(m) Remove bolt D and the nut on the axle carrier side and lower the rear No. 2 suspension arm assembly from the knuckle assembly (Fig. 1-4).

CAUTION: The nut has a locking feature. Remove the bolt and nut by turning the **BOLT** while the nut is held in place.

(n) Remove rear shock absorber assembly.

(1) Remove the 3 nuts on the upper side of the rear shock absorber assembly (Fig 1-5).

(2) Remove two fender liner nuts to access the rear shock absorber assembly.

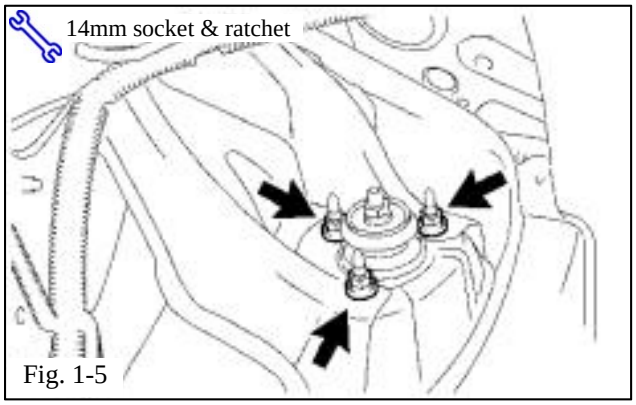

Fig. 1-5

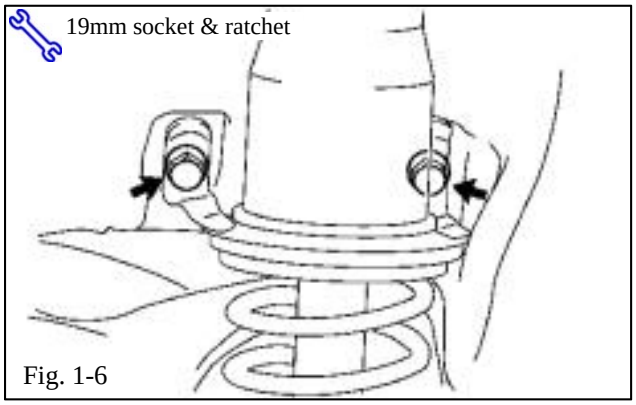

Fig. 1-6

(3) Remove the 2 bolts and the rear shock absorber assembly from the body (Fig. 1-6). Retain the bolts for reassembly.

(o) Remove the spring from shock absorber assembly.

(1) Use a spring compressor to compress the rear coil spring until the tension is removed from the shock absorber assembly (Fig. 1-7).

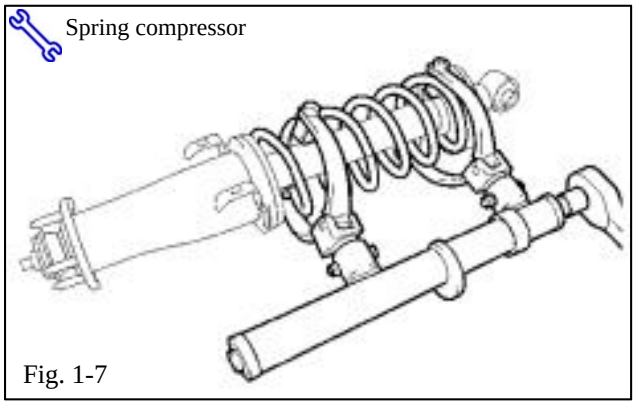

Fig. 1-7

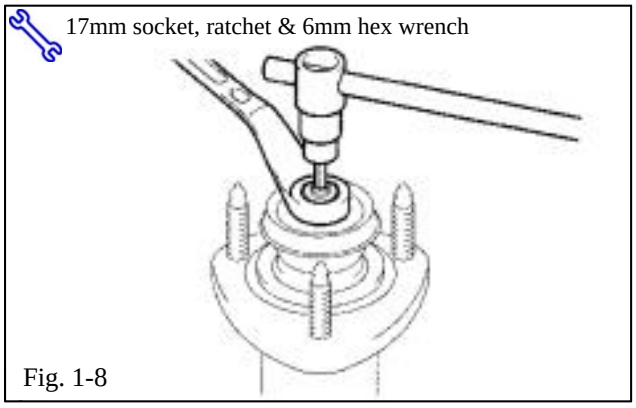

Fig. 1-8

(2) Remove the upper shock absorber nut. If the shaft spins with the nut, hold the rod of the rear shock absorber assembly with a 6mm hexagon wrench (Fig. 1-8).

(3) Note the order and position of the washer, bushings and jounce bumper for reassembly.

(p) Discard the OE coil spring.

(q) Repeat Step 1 on the other side of the vehicle.

2. Install the *F*-Sport Rear Springs.

(a) Install the rear lower coil spring insulator and fit the rear coil spring end into the recessed part of the rear lower shock absorber seat (Fig. 2-1).

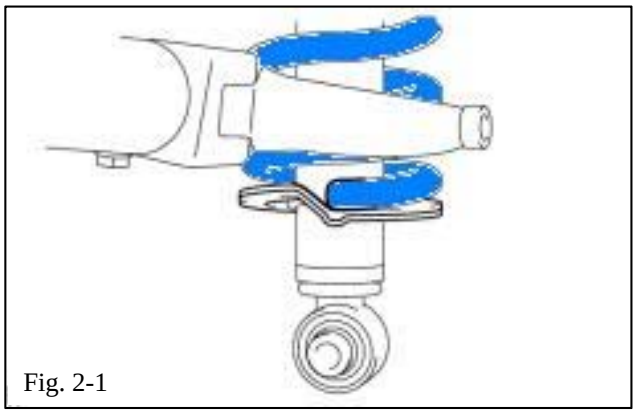
Fig. 2-1

(b) Reassemble the shock absorber/spring assembly as shown below (Fig. 2-2).

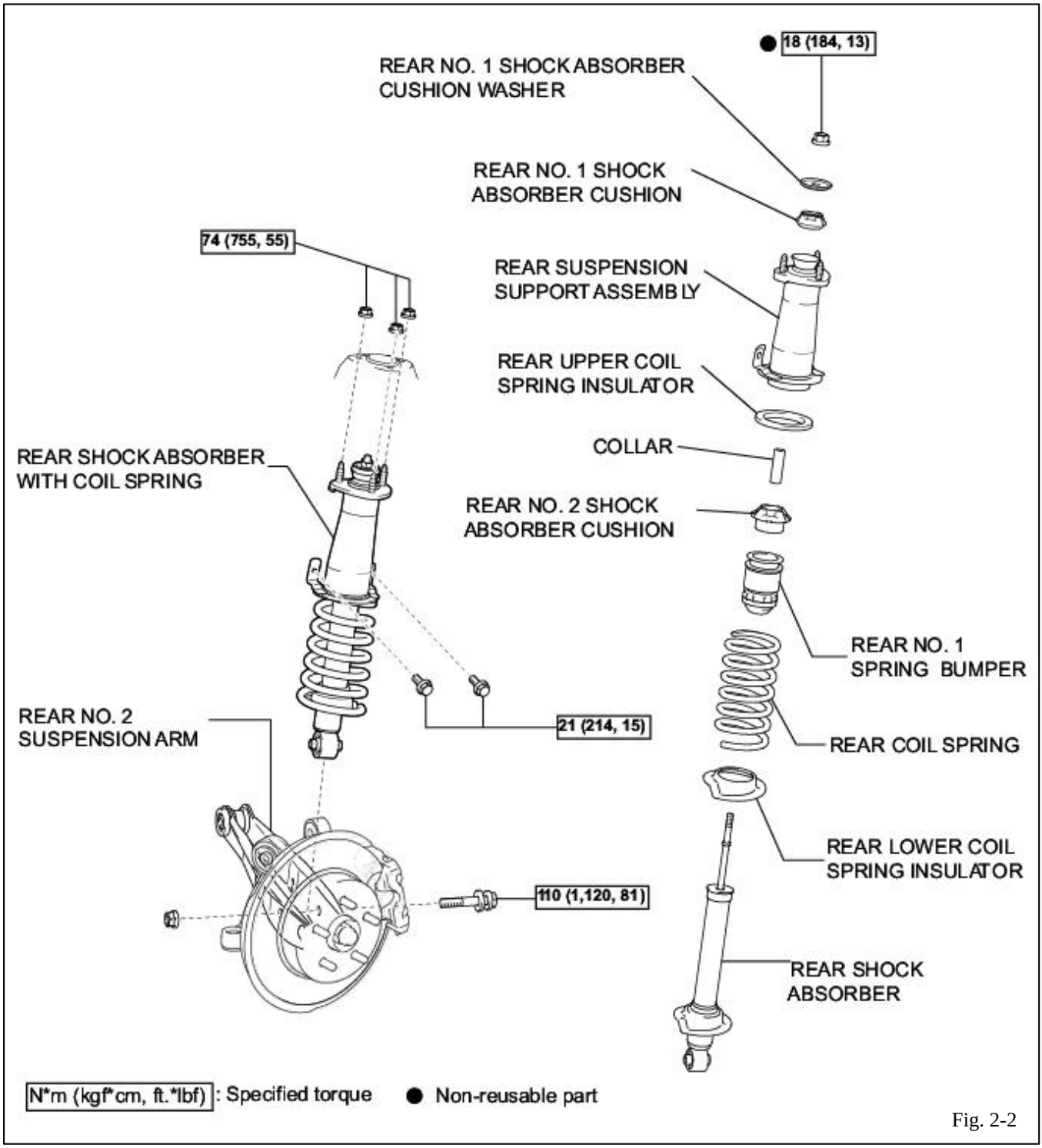

Fig. 2-2

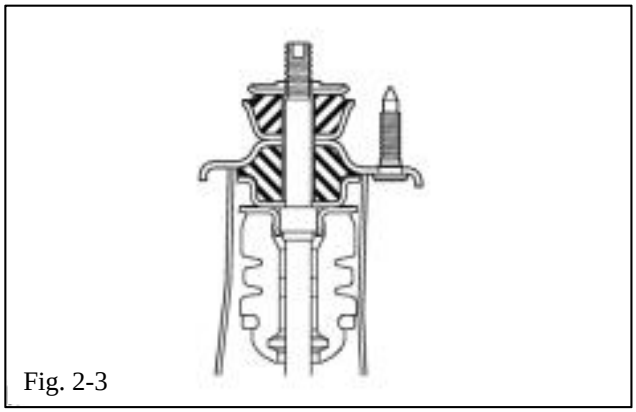

Fig. 2-3

(c) Ensure the cushions and washer (lip turned up) are assembled in the correct direction and order (Fig. 2-3).

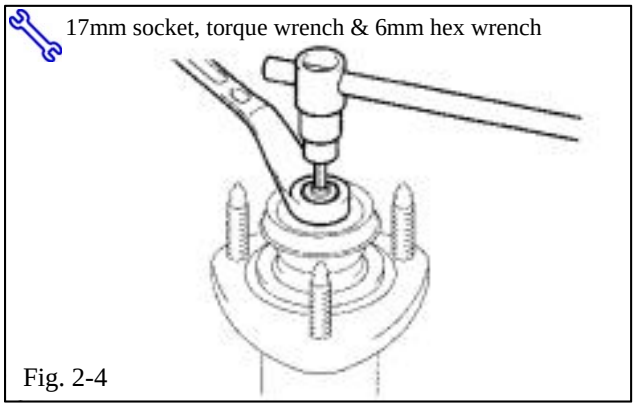

Fig. 2-4

(d) Torque the new shock absorber shaft lock nut (Fig. 2-4).

Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)

(e) Repeat Step 2 on the other side of the vehicle.

3. Install the Rear Shock Absorber/Spring Assembly.

(a) Ensure that the left (driver's side) coil spring end faces towards the front of the vehicle and the right coil spring end faces towards the rear (Fig. 3-1).

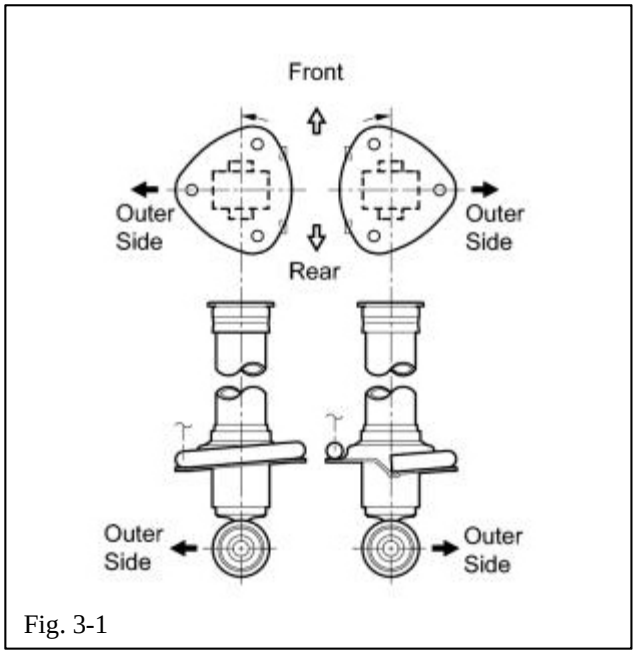

Fig. 3-1

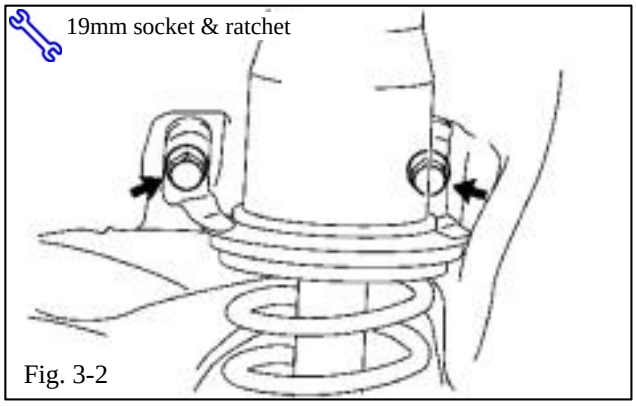

Fig. 3-2

(b) Temporarily install the rear shock absorber assembly with the 2 bolts removed in Step 1(n)(3) (Fig. 3-2).

NOTE: Leave the bolts loose.

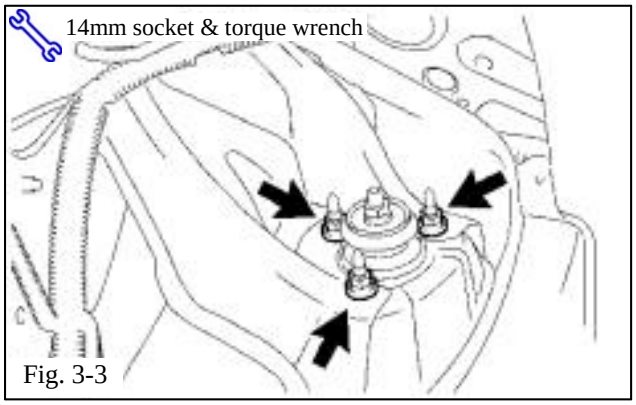

Fig. 3-3

(c) Install the 3 nuts on the upper side of the rear shock absorber assembly (Fig. 3-3).

Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)

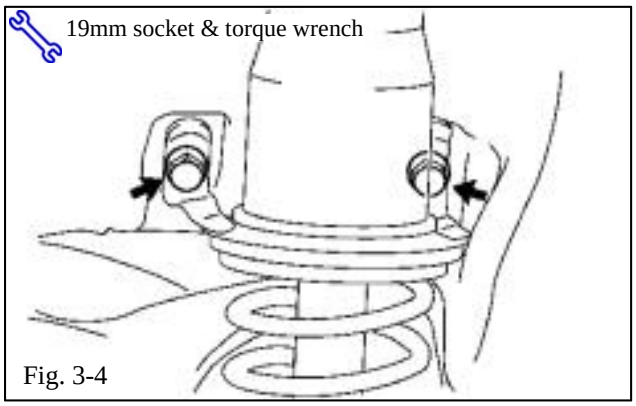

Fig. 3-4

(d) Torque the 2 bolts on the rear shock absorber assembly (Fig. 3-4).

Torque: 21 N·m (214 kgf·cm, 16 ft·lbf)

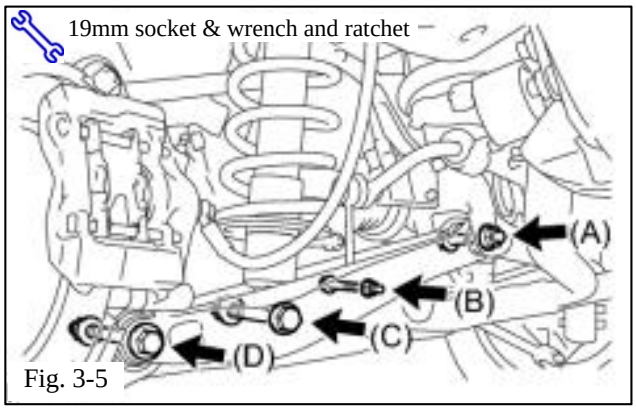

Fig. 3-5

(e) Raise the lower the suspension arm and temporarily install the nuts and bolts for the stabilizer link assembly (B), shock absorber (C) and knuckle (D) (Fig. 3-5).

CAUTION: Confirm that the height control sensor link is positioned correctly and not folded inward.

(f) Repeat Step 3 for the other side of the vehicle.

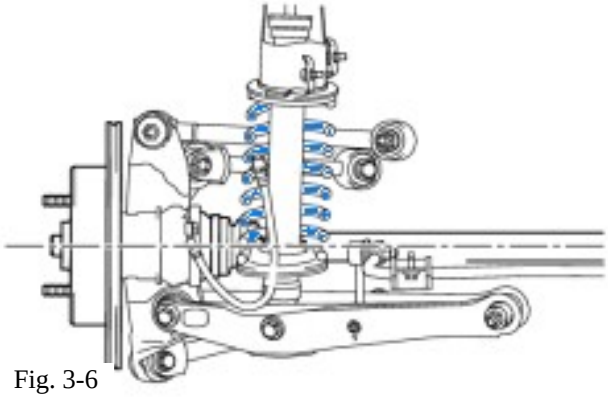
Fig. 3-6

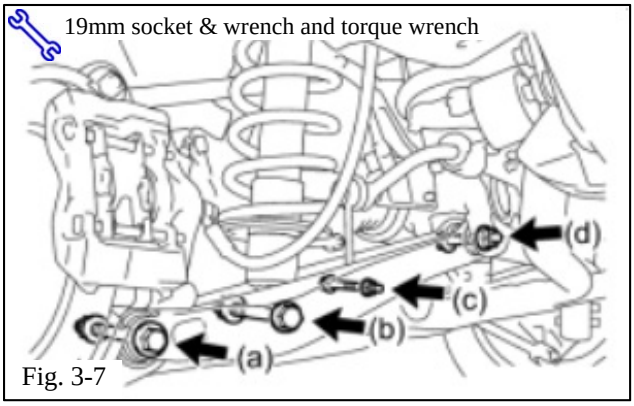

Fig. 3-7

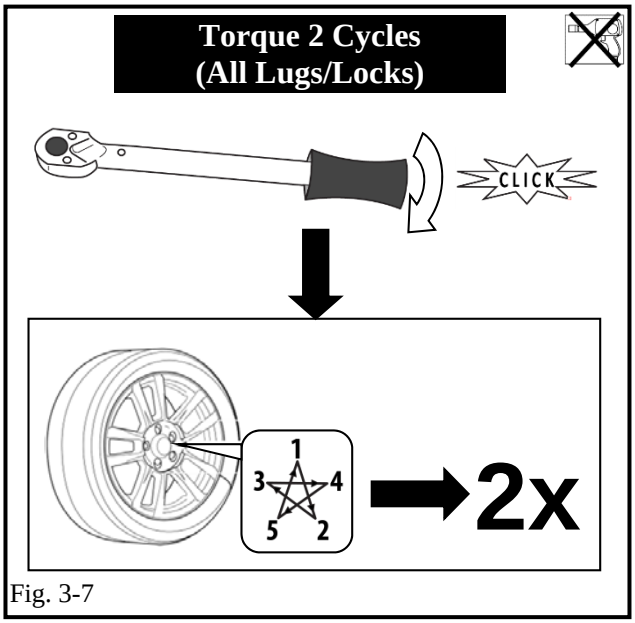

Fig. 3-7

STOP (g) Safely load the suspension (1 of 3 ways):

NOTE: The drive axle should be about level (Fig. 3-6).

(1) Lower the vehicle arm onto a tripod stand.

(2) Raise the suspension arm with a block of wood and a floor jack.

(3) Install a wheel and lower the vehicle onto a load ramp.

(h) Torque the nuts and bolts on the rear No. 2 suspension arm assembly (Fig. 3-7).

S **Torque(A): 161 N•m (1,640 kgf•cm, 119 ft·lbf)**

S **Torque(B): 110 N·m (1,120 kgf·cm, 81 ft·lbf)**

S **Torque(C): 27 N•m (275 kgf•cm, 20 ft·lbf)**

S **Torque(D): 140 N·m (1,430 kgf·cm, 103 ft·lbf)**

(i) Install the rear fender liner nuts.

(j) Install the rear wheel/tire assemblies onto the vehicle. Hand start the lug nuts.

(k) Use a torque wrench to tighten the lug nuts in sequence 1 through 5 to 103N·m (76 ft-lbf) (Fig. 3-7).

S **Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)**

(l) Re-torque all of the lug nuts in same the 1-5 sequence (Fig. 3-7).

S **Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)**

STOP **CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.**

(m) Install the side luggage compartment trim covers.

(n) Install the front luggage compartment trim covers and the rear floor finish plate.

(o) Install the tool box and the tool box board.

(p) Install the luggage compartment trim side cover LH and RH.

(q) Install the luggage compartment floor mat.

4. Remove the Front Shock/Spring Assemblies.

(a) Remove the front wheels.

CAUTION: Do not use an impact wrench on wheel locks (if equipped).

(b) Detach the speed sensor wire from the shock absorber assembly and disconnect it from the speed sensor (Fig. 4-1).

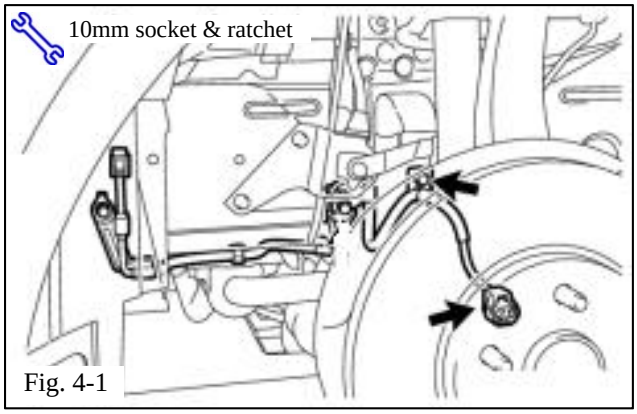

Fig. 4-1

(c) Remove the nut and bolt holding the lower end of the shock absorber (Fig. 4-2).

(d) Remove engine room side covers.

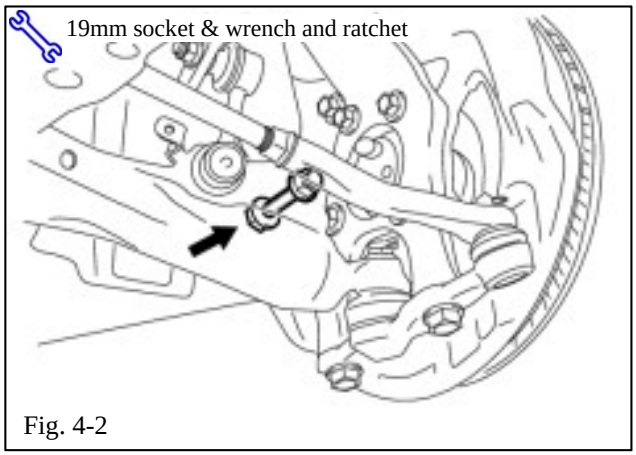

Fig. 4-2

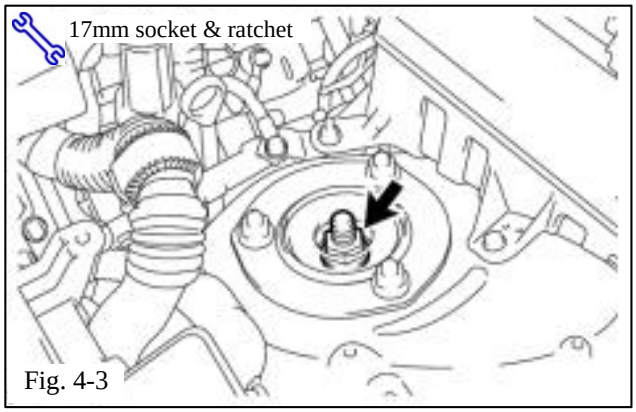

Fig. 4-3

(e) Loosen the front shock absorber lock nut (Fig. 4-3).

NOTE: Do not remove the lock nut.

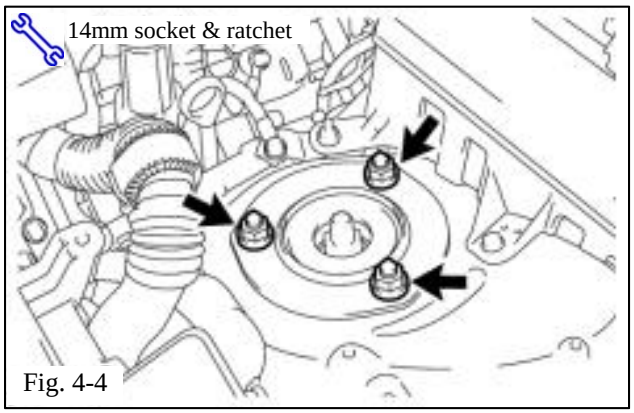

Fig. 4-4

(f) Remove the 3 nuts on the upper side of the front suspension support (Fig. 4-4).

NOTE: The lower arm bushing preload will not allow the shock assembly to fall.

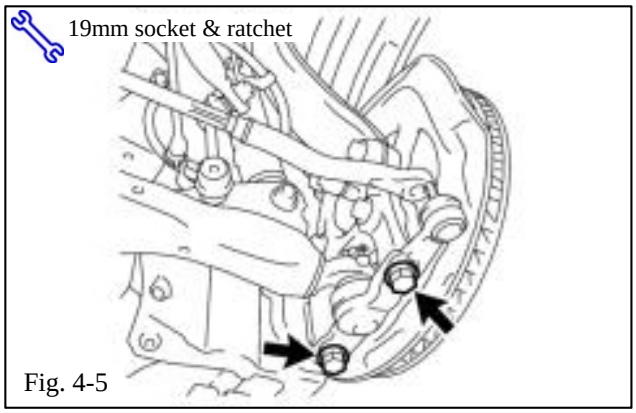

Fig. 4-5

(g) Remove the 2 bolts from the front lower ball joint (Fig. 4-5).

(h) Remove the shock absorber/spring assembly from the vehicle.

(i) Repeat Step 4 on the other side of the vehicle.

5. Replace the Front Springs.

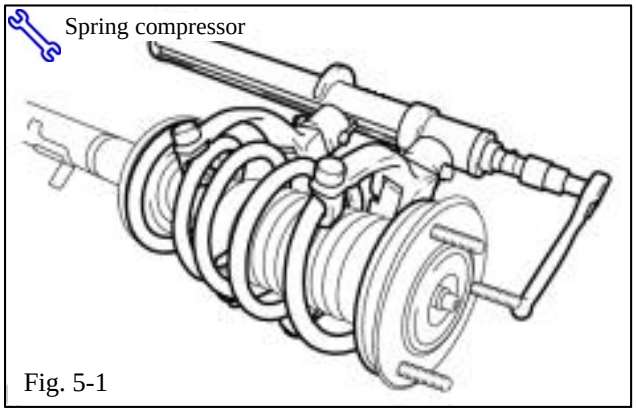

Fig. 5-1

(a) Compress the spring enough to remove tension from the upper spring support (Fig. 5-1).

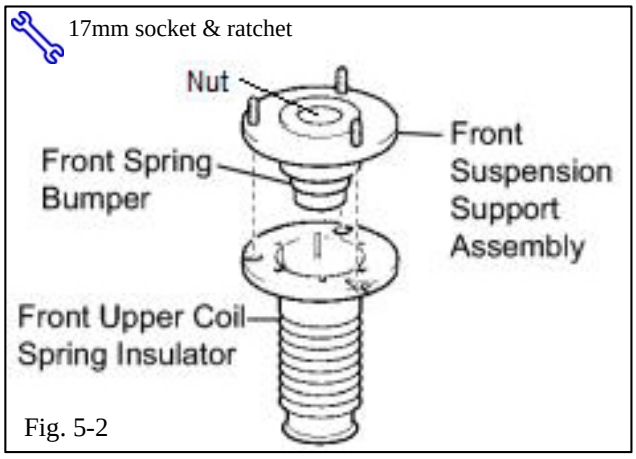

Fig. 5-2

(b) Remove the lock nut (Fig. 5-2). It will not be reused.

(c) Remove the front suspension support assembly with the front upper coil spring insulator (Fig. 5-2). Retain them for reinstallation.

(d) Remove the coil spring.

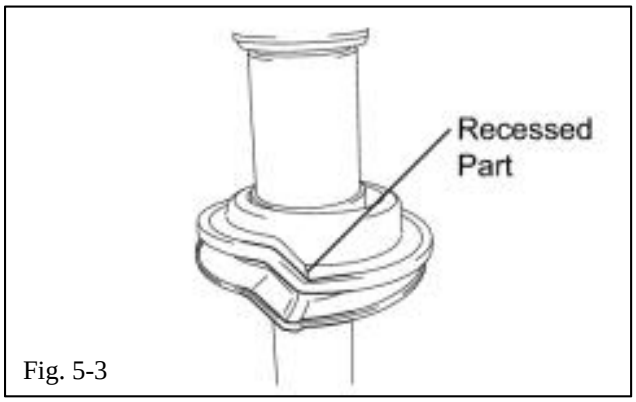

Fig. 5-3

(e) Confirm the lower spring insulator is indexed properly and free of debris (Fig. 5-3).

(f) Compress a new front spring and place it over the shock absorber assembly.

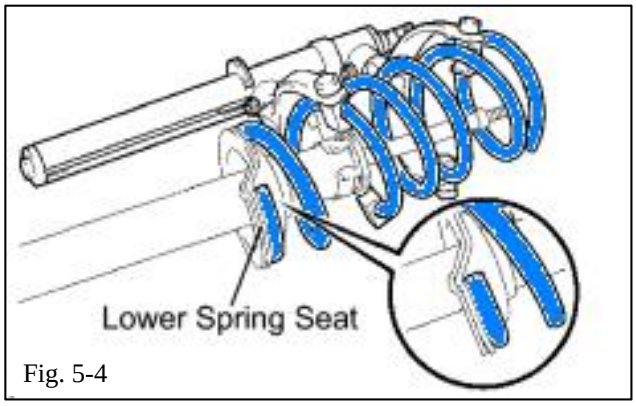

Fig. 5-4

(g) Confirm that the end of the spring sits in the stepped portion (*a) of the lower spring seat (Fig. 5-4).

NOTE: Ensure the F-Sport logo is facing outward.

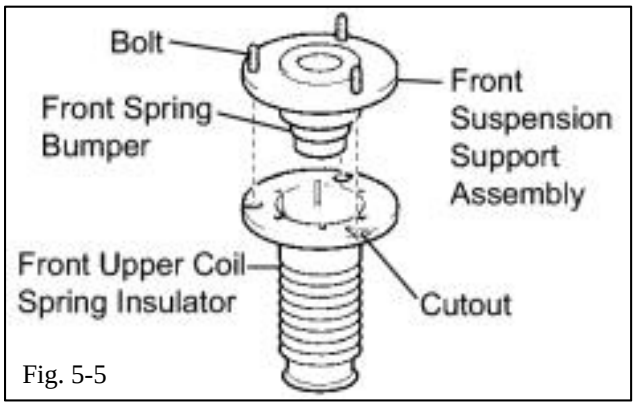

Fig. 5-5

(h) Install the front spring bumper onto the front suspension support assembly (Fig. 5-5).

(i) Align the bolt heads of the front suspension support assembly with the cutouts of the front upper coil spring insulator (Fig. 5-5).

(j) Install the front upper coil spring insulator on the front suspension support assembly (Fig. 5-5).

(k) Match the shape of the piston shaft end to the hole in the front suspension support assembly to install the front shock absorber (Fig. 5-6).

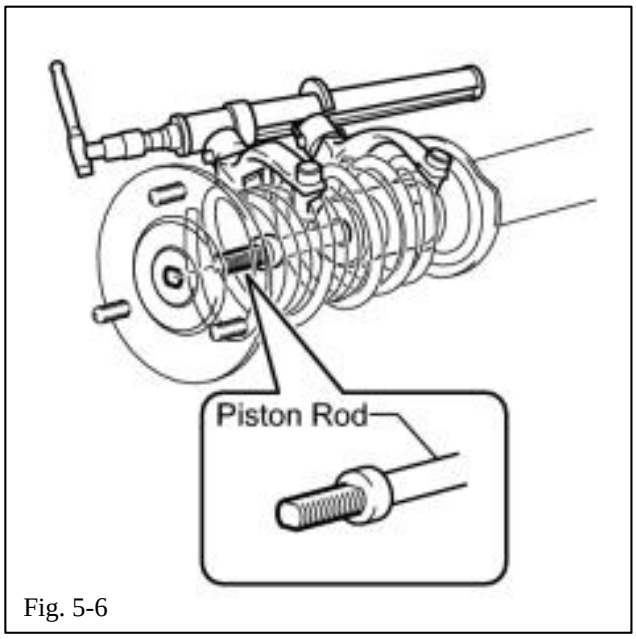

Fig. 5-6

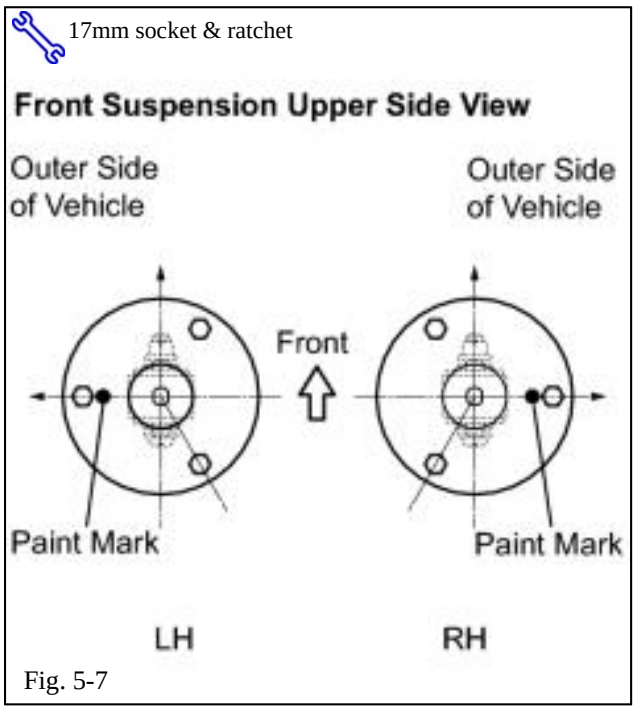

Fig. 5-7

(l) Align the front suspension support assembly to the position shown (Fig. 5-7).

(m) Temporarily tighten a supplied lock nut to the front shock absorber.

(n) Remove the spring compressor from the front coil spring.

6. Install the Front Shock/Spring Assemblies.

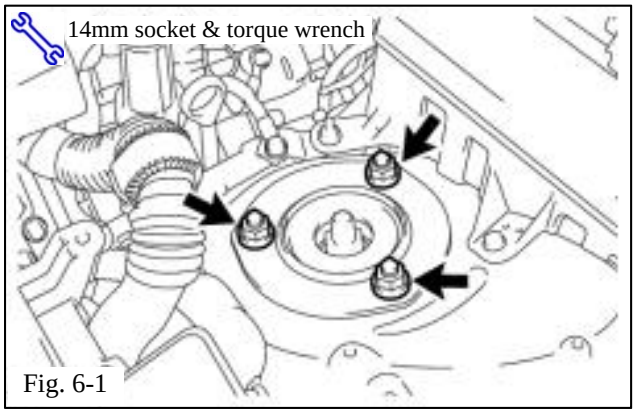

Fig. 6-1

(a) Install the front shock absorber assembly into the vehicle and tighten the 3 nuts on the suspension support (engine bay) side (Fig. 6-1).

Torque: 67 N·m (683 kgf·cm, 49 ft·lbf)

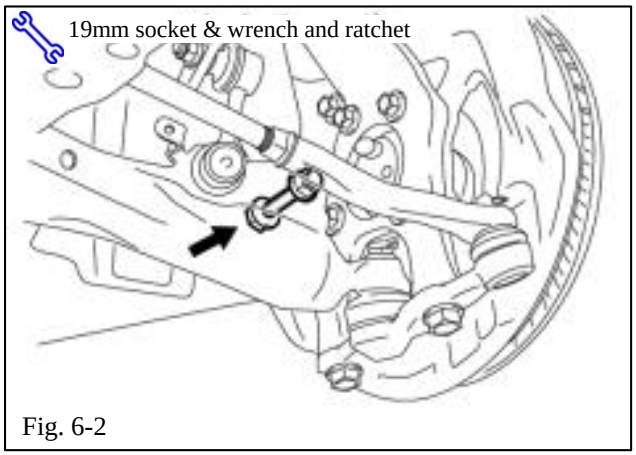

Fig. 6-2

(b) Install the front shock absorber lower side on the front lower suspension arm and insert the bolt from the rear of the vehicle (Fig. 6-2).

(c) Temporarily tighten the nut while holding the bolt.

NOTE: The nut will be fully tightened after settling the suspension.

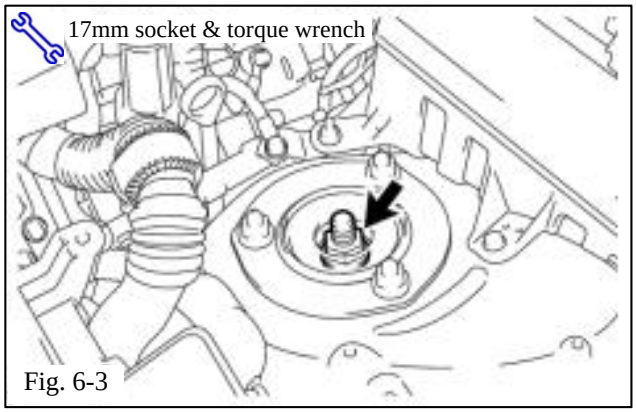

Fig. 6-3

(d) Torque the new shock absorber assembly lock nut (Fig. 6-3).

Torque: 28 N·m (286 kgf·cm, 21 ft·lbf)

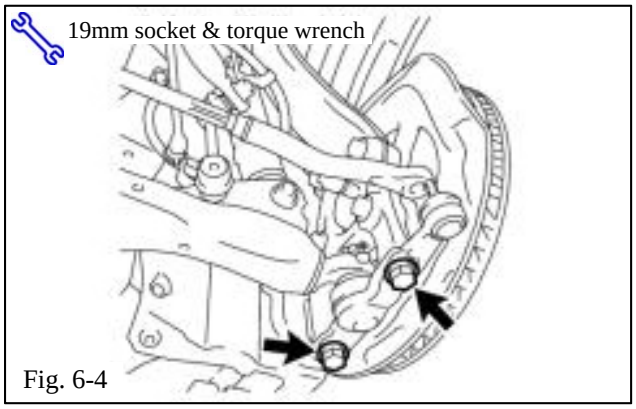

Fig. 6-4

(e) Replace the 2 bolts into the front lower ball joint (Fig. 6-4).

Torque: 120 N·m (1,220 kgf·cm, 89 ft·lbf)

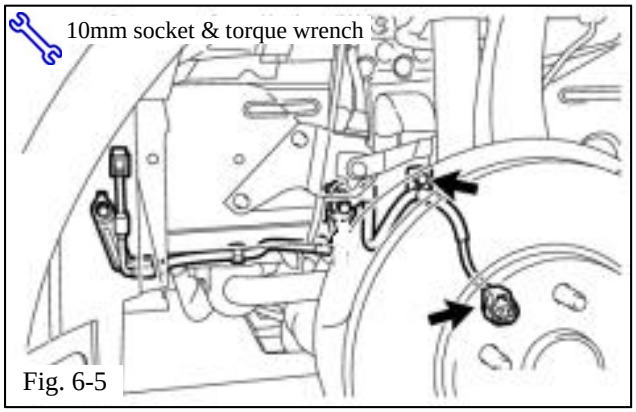

Fig. 6-5

(f) Install the front speed sensor to the front shock absorber and reconnect it (Fig. 6-5).

Torque: 6.0 N·m (61 kgf·cm, 53 in·lbf)

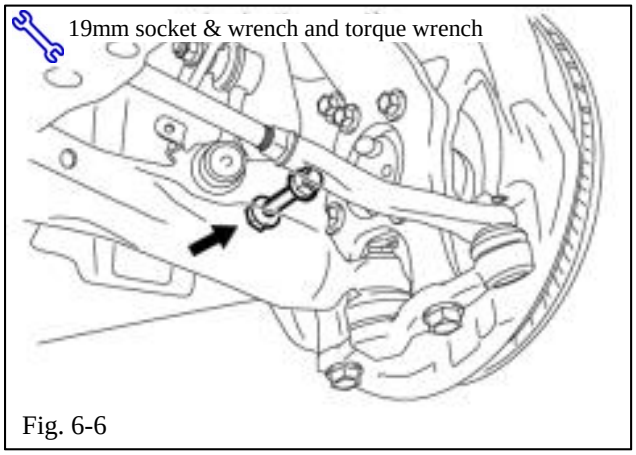

Fig. 6-6

(g) Torque the lower shock absorber bolt (Fig. 6-6).

NOTE: Compress the lower suspension arm to support the weight of the vehicle.

Torque: 157 N·m (1,600 kgf·cm, 116 ft·lbf)

(h) Install the engine room side covers.

(i) Repeat Step 6 on the other side of the vehicle.

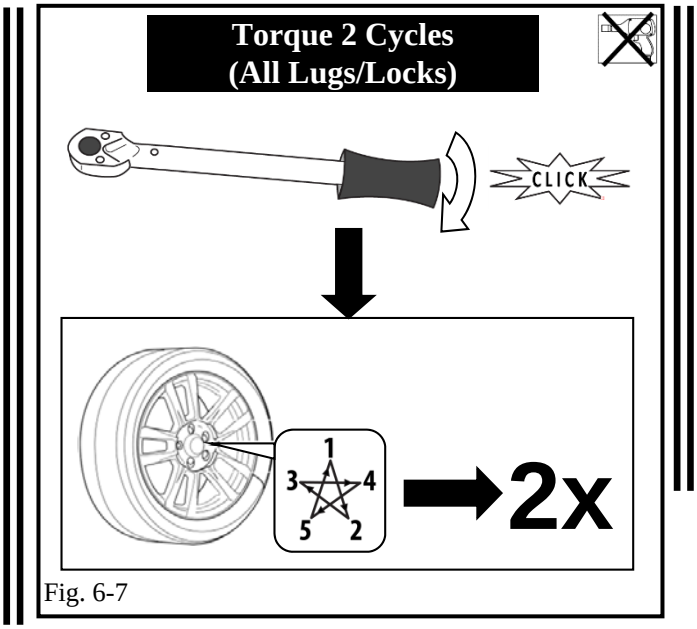

Fig. 6-7

(j) Install the front wheel/tire assemblies onto the vehicle. Hand start the lug nuts.

(k) Use a torque wrench to tighten the lug nuts in sequence 1 through 5 (Fig.6-7).

Torque: 103N·m (1,050 kgf·cm , 76 ft-lbf)

(l) Re-torque all of the lug nuts in same the 1-5 sequence (Fig. 6-7).

Torque: 103N·m (1,050 kgf·cm , 76 ft-lbf)

CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.

7. Adjust the Wheel Alignment.

(a) Adjust the front toe settings.

Front Toe-In (total):

1.0 +/- 2.0 mm (0.04 +/- 0.08 in.)

(b) Adjust the rear toe settings.

Rear Toe-In (total):

3.0 +/- 2.0 mm (0.12 +/- 0.08 in.)

Checklist - these points **MUST** be checked to ensure a quality installation.

Check:	Look For:
Accessory Function Checks	
☐ Check for noise	Confirm all springs are seated properly
☐	
☐	
☐	
Vehicle Function Checks	
☐ Confirm VSC light is not on	Speed sensor wires are plugged in
☐ Confirm ASF OFF light is not on	Height sensor links are positioned correctly
☐ Confirm all hardware with torque values are tight	Loose hardware
Vehicle Appearance Check	
☐ After accessory installation and removal of protective cover(s), perform a visual inspection.	Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)